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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPLICANT(s): Vanttinen et al.

SERIAL NO.: 09/864,017

ART UNIT: 2135

FILING DATE: 05/23/2001

EXAMINER: Truong,
Thanhnga, B.

TITLE: METHOD FOR PROCESSING LOCATION INFORMATION
RELATING TO A TERMINAL CONNECTED TO A PACKET
NETWORK VIA A CELLULAR NETWORK

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APPELLANTS' REPLY BRIEF
(37 C.F.R. § 41.41)

This is in response to the Examiner's Answer mailed on April 21, 2006.

RESPONSE TO ARGUMENT

A. 35 U.S.C. 102(e)

1. Claim 33

Claim 33 is patentable under 35 U.S.C. 102(e) over Jokiaho. Claim 33 of the present Application recites a mobile station, comprising means for receiving a notification from a cellular network about the location information request and means for notifying a packet data device, which is either an integral part of the mobile station or attached to the mobile station, about the location information request. For the reasons stated in Appellant's Brief and for the reasons stated below, Jokiaho fails to disclose or suggest these features.

The Examiner merely cites to column 3, lines 57-67 of Jokiaho in support of the rejection without any further support. There are two possible interpretations of the Examiner's rejection. Either (1) the Examiner sees the Appellant's claimed features in Jokiaho's suggested way of operating, or (2) the Examiner believes that at least some of the Appellant's claimed features are met by Jokiaho referring to "extra signalling caused by location updating".

With respect to the first interpretation, Appellant fails to see how Jokiaho's suggested way of operating could disclose a notification from a cellular network about a location information request as is claimed in claim 33. The language from Jokiaho that is quoted by the Examiner states that the data packets arriving at the data service center from a mobile station contain an identifier of the cell or group of cells from which the mobile station transmitted the data packets. The mobile station of Jokiaho is not receiving a notification of any kind, but rather, is telling the cell radio network that it is moving from one cell to another. This happens automatically, without any type of location request. Thus, there is no disclosure in Jokiaho of a "means for receiving a

notification from a cellular network about a location information request” as claimed in Appellant’s claim 33.

With respect to the second alternative interpretation, it is possible that the Examiner believes that “extra signalling caused by location updating” in Jokiahho would contain some kind of implicit disclosure of the Appellant’s claimed feature of “means for receiving a notification from a cellular network about a location information request”. The Examiner may be neglecting the fact that in conventional cellular systems the “extra signalling caused by location updating” means that location update messages are transmitted by mobile stations when they have entered a new cell. Location update messages are also transmitted by mobile stations in conventional systems when they have spent a long enough time in the same cell and a location update timer elapses. Neither of these cases involves receiving any requests from the cellular network as is claimed by Appellant. Both of the location update messages noted above in conventional cellular systems take place at the initiative of the mobile station, without any type of request which clearly distinguishes Jokiahho from Appellant’s claims.

The Appellant’s claimed features of notifying “a packet data device, which is either an integral part of the mobile station or attached to the mobile station, about the location information request” are not disclosed in Jokiahho. Jokiahho specifically discloses how packets are equipped with location identifiers on their way towards the data service center. The relaying mobile communication network element, such as a base station controller BSC, adds to the location updating control packet the identifier of the cell from which the packet was received (Col. 3, L. 57-61; Col. 8, L. 6-10). Thus, in Jokiahho the source from which the packets come from is irrelevant in view of the location identifier being added by the relaying mobile communication network element.

Furthermore, Jokiahho does not disclose a “data packet device, which is either an integral part of the mobile station or attached to the mobile station” as claimed by Appellant. In the Examiner’s rejection the Examiner refers to the data service center of

Jokiaho. The data service center of Jokiaho is a fixed network element and not part of any mobile station or attached to any mobile station. In Jokiaho, the data service center is a computer located within the communications network and cannot be "an integral part of" or "attached to" the mobile station. Therefore, claim 33 is patentable over Jokiaho under 35 U.S.C. 102(e).

2. Claim 34

Claim 34 is dependent on claim 33 and is patentable under 35 U.S.C. 102(e) over Jokiaho at least for the reasons noted above with respect to claim 33. Further, claim 34 recites, the means for responding to the cellular network are arranged to be initiated by a permission sent by the packet data device. Jokiaho does not disclose or suggest these features. For the reasons stated in Appellant's Brief and for the reasons stated below, Jokiaho does not disclose or suggest the features of Appellant's claim 34.

Appellant's claim 34 recites "a permission sent by the packet data device". For the reasons noted above with respect to claim 33, Jokiaho does not disclose a "data packet device" as claimed by Appellant. In addition, the Examiner refers to a passage of Jokiaho that merely states how the data service center opens and handles the packets while the MSC and BSC only route them (column 5, lines 28-35). There is simply no connection whatsoever between the passage cited by the Examiner, or in any other passage of Jokiaho, and the Appellant's claimed features. Thus, Jokiaho cannot disclose or suggest a permission sent by the packet data device. Therefore, claim 34 is patentable over Jokiaho.

B. 35 U.S.C. 103(a)

1. Claim 27

The Examiner cites to column 5, lines 37-62 of Havinis in support of the rejection of claim 27. However, this passage of Havinis merely discloses that certain location specific information is exchanged and some authentication and key handling is performed without any references to any security associations pointing anywhere.

Claim 27 recites a data packet device being an integral part of a mobile station or being attachable to a mobile station comprising means for receiving information about a location information request and about a sender of a location information request from a mobile station and means for exchanging with a network element connected to a cellular network information about a security association, which points to the network element from the sender of the location information request. There is simply no disclosure or suggestion in Havinis or Jokiahho of a security association, which points to the network element from the sender of the location information request.

Although Barnes refers to IP Security at column 4, lines 13-18 and security gateway at column 4, Lines 31-35, the IP Security and security gateway are not the same as what is described and claimed by Appellant. Neither the IP security nor the security gateway of Barnes point to the network element from the sender of the location information request. Thus, claim 27 is patentable over the combination of Havinis, Jokiahho and Barnes.

2. Claims 28-30

The Examiner states that “these claims consist of a data packet device being an integral part of a mobile station”. The Examiner equates the data service center of Jokiahho to the data packet device claimed by Appellant. However, the data service center of Jokiahho is a computer located somewhere in the communications network and is disclosed as being connected to the mobile services switching center (10), a base station controller or a base station (Col. 5, L. 2-5). Thus, the data service center cannot be a data packet device as called for in claims 28-30.

Further, the combination of Havinis, Jokiahho and Barnes fails to disclose or suggest means for establishing a second security association, which points to the device from the sender of the location information request and specifies at least data origin authentication as recited in claim 28.

There are no dedicated security connections in Havinis or security associations that point from one network element to another network element. Furthermore, Havinis simply does not disclose or suggest “data origin authentication” as recited in Appellant’s claim 28. Havinis merely discloses that when a positioning request for a particular mobile station is received by a serving mobile location center serving a cell within the public land mobile network that the mobile station is currently located in, the servicing mobile station must choose the optimum position method available (e.g. timing advance, time of arrival, angle of arrival, GPS, etc.) (Col. 4, L. 30-47).

Jokiahho is merely concerned with reducing the amount of signalling for location management concerning packet transmission compared to location management concerning normal traffic. Jokiahho simply does not disclose or suggest “a second security association, which points to the device from the sender of the location information request” or “data origin authentication” as recited in claim 28. Nor is there

a location information request made in Jokiahho as claimed by Appellant and described in Apellant's Appeal Brief.

As described above, neither the IP security nor the security gateway of Barnes point to the device from the sender of the location information request. Furthermore, there is simply no disclosure or suggestion in Barnes that a request from the "sender" specifies "at least data origin authentication" as recited in claim 28.

Thus, the combination of Havinis, Jokiahho and Barnes fails to disclose or suggest all the features of claim 28. Therefore, claim 28 is patentable over the combination of Havinis, Jokiahho and Barnes.

Claim 29 recites means for requesting a network element of the cellular network to produce security documents relating to the device and to the sender of the information request for the establishment of the second security association. Neither Havinis, Jokiahho nor Barnes, individually or in combination disclose or suggest these features.

There is simply no disclosure or suggestion in Havinis of security documents relating to the device and to the sender of the information request as recited in claim 29. The location deciphering key of Havinis relates to the mobile station and its calculation of its position (Col. 5, L. 37-62) not to a "sender of the information request". The subscriber identification key of Havinis merely relates to a subscriber record (29) associated with the mobile station (Col. 5, L. 50-58).

Jokiahho also fails to disclose security documents relating to the device and to the sender of the information request. There is simply no information request made in Jokiahho. The location updating request of Jokiahho does not request information but rather tells the cellular radio network that the mobile station is moving from one cell to another and to update subscriber information of the mobile station that is stored in the subscriber database of the cellular radio network (Col. 6, L. 60-63; Col. 7, L. 19-24).

Barnes simply does not disclose or suggest security documents relating to the device and to the sender of the information request as recited in claim 29. Therefore, claim 29 is patentable over the combination of Havinis, Jokiahho and Barnes.

With respect to claim 30, claim 30 speaks about transmitting to the mobile station a permission to send location information to the sender of the location information request, which means are arranged to transmit the permission when there is the security association. For the reasons noted above and in Appellant's Brief, the combination of Havinis, Jokiahho and Barnes simply do not disclose or suggest a location information request, a permission or a security association as claimed by Appellant.

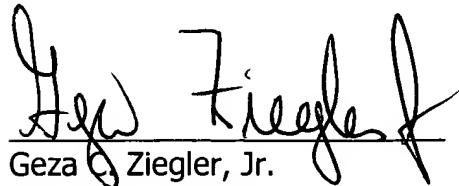
3. Claims 31 and 32

Claims 31 and 32 speak to a data packet device being an integral part of the mobile station or being attached to the mobile station that has a means for locating itself. As described above, the data service center of Jokiahho is not a data packet device that is an integral part of the mobile station or attached to the mobile station. The data service center of Jokiahho is a computer located within the depths of the network. The Examiner further cites to column 5, lines 31-44 of Havinis. However this passage merely refers to a mobile station having terminal-based positioning capabilities and not to a data packet device as claimed by Appellant. Nowhere does the combination of Havinis, Jokiahho and Barnes disclose or suggest the features recited in Appellant's claims 31 and 32.

Therefore, in view of the foregoing, Appellant respectfully requests that the Board reverse the Examiner's rejection of the claims and allow the case to proceed to issue as a U.S. Patent. Should any unresolved issues remain, the Examiner is invited to call Applicant's attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any additional fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,



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